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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,060	11/26/2003	Stanislav V. Zhilkov	ZHILIKOV-2	8625
7590	04/27/2005		EXAMINER	
Albert T. Keyack 1005 Glendevon Drive Ambler, PA 19002			SPECTOR, DAVID N	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No.	Applicant(s)
	10/723,060	ZHILKOV, STANISLAV V.
	Examiner	Art Unit
	David N. Spector	2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 March 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 March 2005 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input checked="" type="checkbox"/> Other: <u>DETAILED ACTION</u>

DETAILED ACTION – FINAL REJECTION

In the previous Office action mailed December 29, 2004 applicant was informed that the Oath/Declaration filed in the instant application was defective; that both the specification and the drawings were objected to; and that a substitute specification was required. The sole claim then pending in the application, Claim 1, was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Moreover, Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Yamada (U.S. Patent No. 6,448,850); and was provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending application Serial No. 10/447,869. In an amendment filed on March 29, 2005 applicant filed a revised oath/declaration (e.g. which is accepted), a substitute specification, revised drawings, and amendments to the claims in response to the previous Office action. By this amendment Claim 1 has been revised, and new claims 2-8 have been added to the application.

Substitute Specification Not Entered

The substitute specification filed March 29, 2005 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: the required statement as to a lack of new matter under 37 CFR 1.125(b) is missing, and the amendatory material incorporated therein appears to go far beyond the correction of "various grammatical and typographical errors", as asserted by applicant in remarks filed with the substitute specification. In particular, applicant's qualified statement (e.g. "*no objectionable new matter has been inserted*") presented in remarks accompanying the substitute specification, is ambiguous and unacceptable (e.g. *In fact, the substitute specification filed March 29, 2005 includes more than seventy lines of newly presented text without any accompanying explanatory remarks*). In addition, the substitute specification filed March 29, 2005 is replete with newly presented semantic defects, idiomatic errors, and numer-

ous other newly-presented errors which, when taken together with the large number of uncorrected errors carried over into the substitute specification from the specification as originally filed, render the intended meaning of the substitute specification at least as unclear as the objected-to specification as originally filed.

Specification – Objections

As noted above, in the preceding paragraph, the substitute specification filed March 29, 2005 has not been entered, and, therefore, a substitute specification in idiomatic English is (still) required pursuant to 37 CFR 1.125(a) because the instant specification is replete with semantic defects and errors that render its meaning unclear (e.g. “transfiguration” surface; “transforming surface”; the entire discussion of the “t-pulses”; and many other defects and errors (e.g. listing of references at the end of the specification with numerical call-outs in square brackets throughout body of the specification; headings, and the arrangement/content of the specification; etc.). Appropriate revisions/corrections are required, in proper idiomatic English, and in compliance with 37 CFR 1.52(a) and (b). A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and (c).

Drawings - Objection

EXAMINER'S NOTE 1: The revised drawings filed March 29, 2005 appear to be taken directly from applicant's copending application Serial No. 10/447,869. In that application, the aforesaid drawings are identified as illustrating “a preferred embodiment” of the invention claimed therein (e.g. an apparatus for modulating light). None of the revised drawings appear to be directed to any embodiment of the instant invention (e.g. source of “terahertz radiation”).

The drawings are therefore objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in (each of the amended and new) claims. Therefore, at least the “metal-dielectric structure” (Claim 1, Line 3); the “delayed electromagnetic wave” (Claim 1,

Line 4); the “spatial region localized within said metal-dielectric structure” (Claim 1, Lines 9-12); the “waveguide structure having suitable geometric configuration and dielectric/metal properties” (Claim 3, Lines 1-2; Claim 7, Lines 2-3); and all of the features limitations recited in Claim 5, Lines 3-8; and must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Proposed drawing corrections or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim (amended) 1 and Claims (new) 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, claims 1 is replete with semantic defects and punctuation errors that render its intended meaning unclear. Furthermore, the functional language extant in the current claims (e.g. “an electromagnetic beam is sent...”; “whereby said beam partially transforms into a delayed electromagnetic beam...”) must be replaced with clear structural features/limitations that clearly establishes the metes and bounds of the claim(s) to be patented. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

EXAMINER'S NOTE 2: Applicant's traverse of the rejection of Claim 1 under 35 U.S.C. 102(b) in remarks accompanying the amendment filed on March 29, 2005 have been considered but are not found to be persuasive because: i) the arguments regarding pulsed vs. continuous-wave radiation are irrelevant inasmuch as the aforesaid distinction appears only in the preamble of applicant's claim 1. Since the body of the claim does not rely on or mention the aforesaid feature in any way, it was not given patentable weight by the examiner in the rejection of the claim; and, ii) the remainder of applicant's traverse appears to argue the presence/absence of numerous features/limitations disclosed both by applicant and in the prior art, but not claimed in the instant application.

EXAMINER'S NOTE 3: Since the intended meaning of claim 1 is very unclear, the following rejection is based on the examiner's overall/subjective impression of the intended metes and bounds of the claims.

Claim (amended) 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamada (U.S. Patent No. 6,448,850). Yamada discloses apparatus for producing the sequence of terahertz electromagnetic pulses by a driven particle beam comprising: an initial electromagnetic beam 4 sent to a metal-dielectric structure (e.g. the entire apparatus shown in Yamada's FIG. 1 includes a dielectric plate 6 and metal electrodes 9, 10) whereby said beam partially transforms into a delayed electromagnetic wave, and a beam of charged particles is sent to said structure 6 whereby the particles' kinetic energy partially transforms into energy of the delayed electromagnetic wave having the same phase-frequency characteristics as transformed field of said beam 4 (col. 4. ln. 19-60), and whereby the transformation of the electromagnetic beam 4 and the excitation of the electromagnetic wave by the beam of charged particles takes place in a defined spatial region, wherein said spatial region is localized within said metal-dielectric structure (e.g. a dielectric plate 6 and metal electrodes 9, 10). Claim (amended) 1 is therefore anticipated by Yamada.

Double Patenting Rejection

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir.

1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

EXAMINER'S NOTE 4: Since the intended meaning of claim (amended) 1 and/or Claim (new) 5 is very unclear, the following rejection is based on the examiner's overall/subjective impression of the intended metes and bounds of the claims.

Claim (amended) 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/447,869. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the features/limitations recited in the body of the instant claim 1 are included, *inter alia*, in the recitation of claim 1 in the aforesaid copending application. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim (new) 5 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/447,869. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the features/limitations recited in the body of the instant claim 5 are included, *inter alia*, in the recitation of claim 1 in the aforesaid copending application. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Other Remarks/Information

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any other inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Spector whose telephone number is (571) 272-2338. The examiner can normally be reached at this number Monday through Friday between 6:00 AM and 2:30 PM. The fax number for the organization where this application is assigned is (703) 872-9306.

April 25, 2005



DAVID N. SPECTOR
PRIMARY EXAMINER